

What is claimed is:

1. A taste masked liquid pharmaceutical composition comprising a pharmaceutically active agent and a taste masking composition.
- 5 2. The composition of claim 1 wherein the taste masking composition comprises a taste masking effective amount of an artificial sweetener.
- 10 3. The composition of claim 1 wherein the pharmaceutically active agent is bitter tasting.
- 15 4. The composition of claim 1 wherein the bitter tasting pharmaceutically active agent is selected from the group consisting of antibiotics, analgesics, anti-inflammatory drugs, antihistamines, antibacterials, antimicrobials, decongestants, anti-depressants, anti-psychotics, antivirals, oncolytics, vaccines, antiepileptics, anti-asthma compounds and antispasmodics.
- 20 5. The composition of claim 1 wherein the bitter tasting pharmaceutically active agent is an antibiotic selected from the group consisting of a naphthyridone-carboxylic acid type antibiotic, a quinolone-carboxylic acid type antibiotic, a cephalosporin type antibiotic, a macrolide type antibiotic and a penicillin type antibiotic.
- 25 6. The composition of claim 1 wherein the bitter tasting pharmaceutically active agent is a quinolone-carboxylic acid type antibiotic selected from the group consisting of levofloxacin, ciprofloxacin, norfloxacin, ofloxacin and enoxacin.
- 30 7. The composition of claim 1 wherein the bitter tasting quinolone-carboxylic acid type antibiotic is levofloxacin.
8. The composition of claim 7 wherein levofloxacin is present in a range of from about 1 gram to about 5 grams of levofloxacin per 100 mL.

9. The composition of claim 7 wherein levofloxacin is present in a range of from about 2.5 grams to about 5 grams of levofloxacin per 100 mL.

5 10. The composition of claim 7 wherein levofloxacin is present in a range selected from about 1 gram of levofloxacin per 100 mL, from about 2.5 grams of levofloxacin per 100 mL or about 5 grams of levofloxacin per 100 mL.

10 11. The composition of claim 1 wherein the taste masking composition comprises from about 70 to 90% weight to volume of the total liquid pharmaceutical composition.

12. The pharmaceutical composition of claim 1 wherein the taste masking composition comprises about 80% weight to volume of the total liquid pharmaceutical composition.

15 13. The composition of claim 1 wherein the taste masking effective amount of an artificial sweetener masks a bitter taste.

20 14. The composition of claim 1 wherein the artificial sweetener is selected from the group consisting of aspartame, acesulfame potassium, cyclamate, saccharin, saccharin sodium and sucralose or mixtures thereof.

25 15. The composition of claim 1 wherein the taste masking effective amount of aspartame is a range of from about 0.15 to about 8 grams per 100 mL.

30 16. The composition of claim 1 wherein the taste masking effective amount of acesulfame potassium is a range of from about 0.15 to about 8 grams per 100 mL.

17. The composition of claim 1 wherein the taste masking effective amount of cyclamate is a range of from about 1 to about 50 grams per 100 mL.
18. The composition of claim 1 wherein the taste masking effective amount of saccharin is a range of from about 0.08 to about 3 grams per 100 mL.
19. The composition of claim 1 wherein the taste masking effective amount of saccharin sodium is a range of from about 0.1 to about 5 grams per 100 mL.
- 10 20. The composition of claim 1 wherein the taste masking effective amount of sucralose is a range of from about 0.05 to about 2.5 grams per 100 mL.
- 15 21. The composition of claim 1 wherein the taste masking effective amount of sucralose is a range of from about 0.45 to about 1.7 grams per 100 mL.
- 20 22. The composition of claim 1 wherein the taste masking effective amount of sucralose is about 1 gram per 100 mL.
23. The composition of claim 1 wherein the taste masking composition further comprises a taste masking effective amount of an artificial sweetener and at least one flavoring agent.
- 25 24. The composition of claim 23 wherein the flavoring agent is selected from the group consisting of natural flavors, natural fruit flavors, artificial flavors, artificial fruit flavors and flavor enhancers or mixtures thereof.
- 30 25. The composition of claim 23 wherein the flavoring agent is present in a range of from about 0.02 to about 0.06 grams per 100 mL.

26. The composition of claim 23 wherein the flavoring agent is present in a range of from about 0.03 to about 0.04 grams per 100 mL.

5 27. The composition of claim 23 wherein the taste masking composition further comprises up to two flavoring agents.

10 28. The composition of claim 27 wherein each flavoring agent is selected from natural flavors, natural fruit flavors, artificial flavors, artificial fruit flavors, flavor enhancers or mixtures thereof.

29. The composition of claim 27 wherein each flavoring agent is present in a range of from about 0.02 to about 0.06 grams per 100 mL.

15 30. The composition of claim 27 wherein each flavoring agent is present in a range of about 0.03 to about 0.04 grams per 100 mL.

31. The composition of claim 1 wherein the taste masking composition further comprises a taste masking effective amount of the artificial sweetener sucralose and at least one flavoring agent.

20 32. The composition of claim 1 wherein the taste masking composition further comprises a taste masking effective amount of an artificial sweetener, at least one flavoring agent, an optional sweetening agent and an optional debittering agent or mixtures thereof.

33. The composition of claim 32 wherein the optional sweetening agent is selected from the group consisting of a sugar sweetener and an artificial sweetener.

25 34. The composition of claim 33 wherein the sugar sweetener is selected from monosaccharides, disaccharides or polysaccharides (selected from xylose, ribose, glucose, mannose, galactose, fructose, dextrose, sucrose

or maltose), high fructose corn syrup, maltitol syrup, partially hydrolyzed starch, corn syrup solids, sugar alcohols (selected from sorbitol, xylitol, mannitol or glycerin) or combinations thereof.

5 35. The composition of claim 33 wherein the sugar sweetener is high
fructose corn syrup.

36. The composition of claim 33 wherein the sugar sweetener is present in a
range of up to about 120 grams per 100 mL.

10 37. The composition of claim 33 wherein the sugar sweetener is present in a
range of from about 50 grams to about 110 grams per 100 mL.

15 38. The composition of claim 33 wherein the artificial sweetener is selected
from the group consisting of aspartame, acesulfame potassium,
cyclamate, saccharin, saccharin sodium and sucralose or mixtures
thereof.

20 39. The composition of claim 33 wherein the artificial sweetener is present in
a range of up to about 1.5 grams per 100 mL.

25 40. The composition of claim 32 wherein the optional debittering agent is
selected from a natural debittering agent, artificial debittering agent or
debittering agent which inhibits a chemosensory response in the mouth
or nose or mixtures thereof.

41. The composition of claim 40 wherein the debittering agent is present in a
range of up to about 1 gram per 100 mL.

30 42. The composition of claim 40 wherein the debittering agent is present in a
range of from about 0.01 to about 0.2 grams per 100 mL.

43. The composition of claim 40 wherein the debittering agent is present in a range of about 0.03 to about 0.05 grams per 100 mL.

5 44. The composition of claim 1 wherein the taste masking composition further comprises a taste masking effective amount of the artificial sweetener sucralose, at least one flavoring agent, an optional sweetening agent and an optional debittering agent or mixtures thereof.

10 45. The composition of claim 1 wherein the taste masked liquid pharmaceutical composition is a suspension comprising a pharmaceutically active agent and a taste masking composition.

15 46. The composition of claim 45 wherein the taste masking composition comprises a taste masking effective amount of an artificial sweetener.

47. The composition of claim 45 wherein the pharmaceutically active agent is bitter tasting.

20 48. The composition of claim 45 wherein the pharmaceutically active agent is a bitter tasting antibiotic.

49. The composition of claim 45 wherein the pharmaceutically active agent is levofloxacin.

25 50. The composition of claim 46 wherein the taste masking effective amount of the artificial sweetener masks a bitter taste.

51. The composition of claim 45 wherein the taste masking composition comprises a taste masking effective amount of the artificial sweetener sucralose.

52. The composition of claim 45 wherein the taste masking composition further comprises a taste masking effective amount of an artificial sweetener and at least one flavoring agent.

5 53. The composition of claim 45 wherein the taste masking composition further comprises a taste masking effective amount of the artificial sweetener sucralose and at least one flavoring agent.

10 54. The composition of claim 45 wherein the taste masking composition further comprises a taste masking effective amount of an artificial sweetener, at least one flavoring agent, an optional sweetening agent and an optional debittering agent or mixtures thereof.

15 55. The composition of claim 45 wherein the taste masking composition further comprises a taste masking effective amount of the artificial sweetener sucralose, at least one flavoring agent, an optional sweetening agent and an optional debittering agent or mixtures thereof.

20 56. The composition of claim 45 wherein the suspension comprises a polysaccharide gum and a microcrystalline cellulose or a carboxymethylcellulose or a mixture thereof.

25 57. The composition of claim 56 wherein the polysaccharide gum is a high molecular weight polysaccharide gum selected from xanthan gum, tragacanth gum, guar gum or carageenan gum.

30 58. The composition of claim 56 wherein the carboxymethylcellulose is selected from carboxymethylcellulose or a metal salt thereof; and, wherein the metal salt is selected from calcium, sodium or potassium.

59. The composition of claim 45 wherein the suspension comprises a polysaccharide gum and a mixture of microcrystalline cellulose and a

carboxymethylcellulose.

60. The composition of claim 59 wherein the polysaccharide gum is xanthan gum.

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61. The composition of claim 60 wherein xanthan gum is present in a range of from about 0.05 to about 0.25 gram per 100 mL.

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62. The composition of claim 60 wherein xanthan gum is present in a range of from about 0.09 to about 0.15 gram per 100 mL.

63. The composition of claim 60 wherein the amount of xanthan gum present is about 0.12 gram per 100 mL.

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64. The composition of claim 60 wherein the carboxymethylcellulose is sodium carboxymethylcellulose.

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65. The composition of claim 59 wherein the mixture of microcrystalline cellulose and a carboxymethylcellulose is present in a range of from about 0.4 to about 1.0 gram per 100 mL.

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66. The composition of claim 59 wherein the mixture of microcrystalline cellulose and a carboxymethylcellulose is present in a range of from about 0.6 to about 0.8 gram per 100 mL.

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67. The composition of claim 59 wherein about 0.7 gram per 100 mL of the mixture of microcrystalline cellulose and a carboxymethylcellulose is present.

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68. The composition of claim 59 wherein the suspension further comprises xanthan gum and a mixture of microcrystalline cellulose and sodium carboxymethylcellulose present in a weight ratio of xanthan gum to the mixture of microcrystalline cellulose and sodium carboxymethylcellulose

in a range of between about 1:4 to 1:8.

69. The composition of claim 68 wherein the weight ratio of the xanthan gum to the mixture of microcrystalline cellulose and sodium carboxymethylcellulose is in a range of about 1:6.

5 70. The composition of claim 68 wherein the xanthan gum and the mixture of microcrystalline cellulose and sodium carboxymethylcellulose are hydrated by an amount of water present in a range of from about 5 to about 60 grams per 100 mL.

10 71. The composition of claim 70 wherein the amount of water present is in a range of from about 10 to about 30 grams per 100 mL.

15 72. The composition of claim 70 wherein the amount of water present is in a range of from about 10 to about 20 grams per 100 mL.

20 73. The composition of claim 70 wherein the amount of water present is about 15 grams per 100 mL.

25 74. The composition of claim 1 wherein the taste masked liquid pharmaceutical composition is a solution comprising a pharmaceutically active agent and a taste masking composition.

25 75. The composition of claim 74 wherein the taste masking composition comprises a taste masking effective amount of an artificial sweetener.

30 76. The composition of claim 74 wherein the pharmaceutically active agent is bitter tasting.

30 77. The composition of claim 74 wherein the pharmaceutically active agent is a bitter tasting antibiotic.

78. The composition of claim 74 wherein the pharmaceutically active agent is levofloxacin.

5 79. The composition of claim 75 wherein the taste masking effective amount of the artificial sweetener masks a bitter taste.

10 80. The composition of claim 74 wherein the taste masking composition further comprises a taste masking effective amount of the artificial sweetener sucralose.

15 81. The composition of claim 74 wherein the taste masking composition further comprises a taste masking effective amount of an artificial sweetener and at least one flavoring agent.

20 82. The composition of claim 74 wherein the taste masking composition further comprises a taste masking effective amount of the artificial sweetener sucralose and at least one flavoring agent.

25 83. The composition of claim 74 wherein the taste masking composition further comprises a taste masking effective amount of an artificial sweetener, at least one flavoring agent, an optional sweetening agent and an optional debittering agent or mixtures thereof.

84. The composition of claim 74 wherein the taste masking composition further comprises a taste masking effective amount of the artificial sweetener sucralose, at least one flavoring agent, an optional sweetening agent and an optional debittering agent or mixtures thereof.